BIOLOGICAL STATUS OF THE NAMES *ABRONIA CARLETONII* AND *A. NEALLEYI* (NYCTAGINACEAE)

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ABSTRACT

The taxonomic history of *Abronia carletonii* Coulter & Fisher and A. *nealleyi* Standl. is reviewed. Galloway (1975), in his revisionary treatment of the genus *Abronia* for the North America desert region, concluded that the two names were synonymous, A. *carletonii* having priority. After examination of the holotype of the latter, this collected in eastern Colorado, I conclude that it is a late-flowering atypical element of the widespread, highly variable, *A. fragrans* Nutt. ex Hook.f *Abronia nealleyi* is typified by material from Reeves Co., Texas. It is a localized species, occurring on bare gypsum outcrops in northern Culberson and Reeves counties of Trans-Pecos, Texas and closely adjacent New Mexico (Eddy Co.).

KEY WORDS: *Abronia,* Nyctaginaceae, Texas

Abronia carletonii was proposed by Coulter & Fisher in 1892, basing this upon a single specimen collected in "eastern Colorado" in 1891 by M. A. Carleton (holotype: *Carleton459,* FM!). Its authors thought their new species to be:

> Most closely related to *A. turbinata* Torr., having the coriaceous double wing of the section, but differing from that species in having slender white glabrous (but minutely glandular) stems, more numerous flowers, broader rose-colored attenuate or cuspidate bracts, and the perianth and its lobes not so deeply cut.

M. E. Jones subsequently reduced *A. carletonii* to varietal status under *A. turbinata.* Standley (1909), however, retained *A. carletonii* (at the time this still known only by the type), noting that "It is not the same as *A. angustifolia* [sic] as Mr. Jones claims, but seems to me much nearer *A. fragrans."*

Galloway (1975) also retained A. *carletonii* but included in this *A. nealleyi,* the latter based upon a single collection made by Nealley in 1893 from "Screw Bean," Reeves Co., Texas. Standley (1909) has provided an excellent sketch of *A. nealleyi.*

In addition to the types mentioned in the above, Galloway cited and/or mapped eight additional collections of *A. carletonii,* as follows:

New Mexico. Eddy Co.: two collections mapped, but not cited.

San Miguel Co.: San Jeronimo, *Benedict 2334* (US).

Texas. Brewster Co. [sic]: " About 25 mi. E of W end of Paso-Tex pipe line road, *Correll & Rollins 23192* (LL). The locality concerned is actually in northern Culberson or Hudspeth counties.

Culberson Co.: two collections mapped, but not cited.

El Paso Co.: two collections mapped, but not cited.

Hudspeth Co.: "Ables", *Parks & Cory 1504* (TAES).

I consider all of the above cited specimens to be *A. nealleyi* (except for the collection from San Miguel Co., New Mexico, which is probably an aberrant specimen of *A. fragrans;* at least it does not belong to *A. nealleyi* as conceived here).

My interest in the several names of *Abronia* mentioned in the above was stimulated by my attempt to place a name upon an erect perennial herb having lanceolate leaf blades that seemed confined to

bare gypsum outcrops of north-cenrtral Trans-Pecos, Texas and closely adjacent New Mexico (Eddy Co). Field work revealed numerous populations of the taxon concerned along state highway 652 from its entry into New Mexico eastwards to Orla, Texas, this also attested to by numerous vouchers on file at SRSC and LL-TEX. Careful study of this material, along with a study of the literature, strongly suggested that these populations are best referred to A. *nealleyi.*

Application of the name *A. carletonii* is moot. Its distribution as portrayed by Galloway (as noted above) made little morphogeographical sense, nor did he map the taxon as occurring in Colorado, where the type was reportedly collected. To resolve the problem I borrowed the type of *A. carletonii.* A brief description of the type and comments upon its likely biological status follows.

Comments upon the type of *Abronia carletonii*

The holotype lacks a root and appears to be a late-flowering sprig taken from a prostrate stem devoid of primary leaves. Its flowering secondary branches possess relatively small flowers. Except for its prostrate stems, the plant superficially resembles *A. nealleyi.* Closer inspection, however, shows that the stems and leaves are lacking the villous vestiture of *A. nealleyi* and, along with its depauperate state and sporatic distribution as displayed by Galloway, I have no hesitation in referring the type material of *A. carletonii* to *A. fragrans.* The latter species is common throughout the western portions of the central grasslands, namely Wyoming, Colorado, and New Mexico, as is obvious from the dot maps of the species provided by Galloway (1975) and Barkley (1976). Indeed, an immature anthocarp from the type of *A. carletonii* (now deposited in a packet on the type sheet itself) shows this to possess five compressed wings, the latter not dilated at their apices. Using Galloway's key to the species of *Abronia,* if annual, the type itself would key to *A .fragrans.* Regardless, for the Atlas of Texas Plants (Turner et al. 2003) I should have taken up the name *A. nealleyi* for material occurring on the gypsum out crops of Culberson and Reeves counties formally called *A. carletonii* by most

workers (e.g.. Reed 1969; Correll and Johnston 1970; Johnston 1988; and yet others). The present contribution calls attention to the misnomer concerned.

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